



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No: 09/972,268

Applicants: Peter R. Baum, William C. Fanslow III, Timothy E. Lofton,
Eric A. Sorensen, and Adel Youakim

Filed: October 5, 2001

Title: NECTIN POLYPEPTIDES

TC/Art Unit: 1644

Examiner: Maher M. Haddad

Docket No.: 3101-A

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.131

We, Peter R. Baum, William C. Fanslow III, Timothy E. Lofton, Eric A. Sorensen,
and Adel Youakim, the undersigned, hereby declare that:

1. This Declaration is made by the inventors of the above-captioned patent application in order to establish a date of invention in the United States prior to April 1, 2000.

2. Prior to April 1, 2000, a DNA clone that encodes human nectin-3 polypeptide (also called "B7L4" polypeptide) had been isolated and its sequence determined in the United States by inventors named in the subject application, as evidenced by the Exhibits A and B enclosed herewith. The works described in Exhibits A and B were completed in this country prior to April 1, 2000.

3. Exhibit A is a copy of a page from one of the laboratory notebooks of Eric A. Sorensen, written in his handwriting, describing a restriction enzyme digest of an isolated lambda phage clone called "HuB7L4 11-1". All dates on the copy have been redacted.

4. Exhibit B (eight pages) is a copy of a computer printout that is incorporated into one of the laboratory notebooks of Eric A. Sorensen, showing the results of the sequencing of the HuB7L4 11-1 clone insert that was performed at the direction of Eric A. Sorensen. The amino acid sequence shown below the corresponding nucleotide sequences is that of human nectin-3 as presented in SEQ ID NO:2 of the above-captioned application (and is identical to amino acids 8 through 549 of SEQ ID NOs 4 and 6). The first page of Exhibit B indicates the location of a predicted signal sequence cleavage site, and the fourth page of Exhibit B indicates the location of the start of the transmembrane domain. All dates on the copy have been redacted.

5. Therefore, on a date prior to April 1, 2000, the inventors of the above-captioned application had determined the amino acid sequence of a human nectin-3 polypeptide including the extracellular domain of a mature form of human nectin-3.

6. As a person signing below: I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Peter R. Baum

Date: _____

William C. Fanslow III
William C. Fanslow III

Date: June 23, 2003

Timothy E. Lofton

Date: 23 JUNE 2003

Eric A. Sorensen

Date: June 24, 2003

Adel Youakim

Date: June 24, 2003

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ODNA for HuB7C4 phage 11-1 and 13 (from file 1.5ray)
 cut in PEG for the 3 weeks I was on vacation.

Spun out Washed 1x 70% EtOH. Spd vac
 -40°C heat. Resuspended o/n in 60 μl H₂O.

Digest ODNAS by EcoRI (NEB restriction buffer) and by NtI (NEB buffer, 70μl)

1.) ODNA 11-1 by EcoRI

2.) " " by NtI

3.) ODNA 13 by EcoRI

4.) " " by NtI

41 ODNA

151 lot buffer

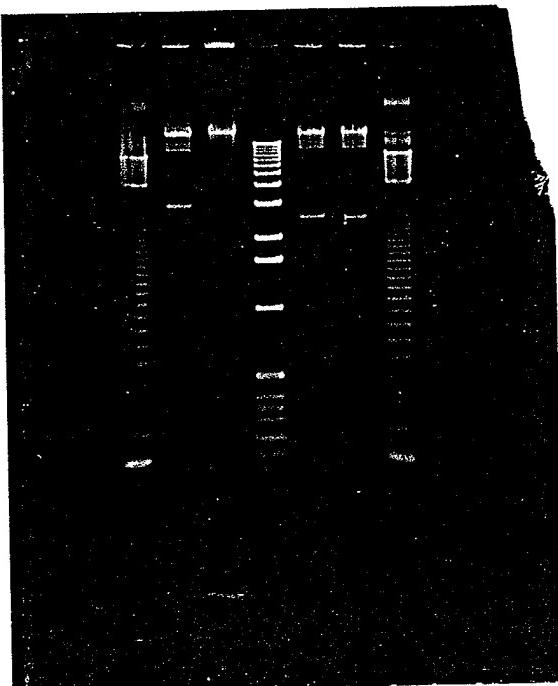
1.5 μl enzyme

9 μl H₂O
 37°C 60-90°

11-1 @ 95.5 μg/ml
 # 13 @ 57.7 μg/ml

RESULTS:

According to this gel, the clone #13 is way small compared to what I estimated by gelation & PCR. I guess I'll see what the DNA sequence like and I'm going to subclone the EcoRI fragment into pBS.



7055 p 80 218

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Witnessed & Understood by me,

Date

Invented by

Date

Recorded by

Barry M. Smith

Barry M. Smith

(Linear) (MinSite=6) MAP of: hub714-11.seq check: 8088 from: 1 to: 3187

HuB7L4 #11 from KB library clone #11-1. Phage DNA: NOT CONFIRMED
sr6527 R. Sorensen

/bertlesj/sorensen/sr6527/hub714-11.seq

8139, 8140

HuB7L4-11

34356-->Sali-GCGGGCATGGCCCGGACCCCCGGCCC-
 V-D -A G M A R T P G P 34053 →
 CAAAAGAATT CGCGGCCGTGTCCCCGCTGTGTCCTGGAGGC GGCAAAGCACA ACTTTCC
 1 -----+-----+-----+-----+-----+-----+-----+ 60
 GTTTTCTTAAGCGCCGGC GACAGGGGCGACACAGGACCTCCGCCGTTCTGTTGAAAGG
 S P L C P G G G K A Q L S

```

      MspA1I
      EarI |
      SapI |           EarI           Bpu10I
      BpmI |           SapI   AlwNI BanI    |   BspGI
      || |           (AgeI)
      34359 --> ACCGGT-AGGCTCTGTGGTGCCTTAGCTGG 33684 →
      CTGCTGCTTCCCCGCTGCTGCTCTTCAGGCTCTGTGGTGCCTTAGCTGGACCAATT
121 -----+-----+-----+-----+-----+-----+-----+-----+ 180
      GACGACGAGAAGGGCGACGACGAGAAGAGGTCCGAGACACCACGGAATCGACCTGGTTAA
                                         ← 34032 (AP1 rev)
a      L L L F P L L F S R L C G A L A G P I -
Predicted signal seq: Gleamage ^
```

73,85 p. 8

TAACACCTCGGTGTACAGTGT CGTCATACCCCTTCTTACAAAGTAATTCAACAAATTAA
 ← 34054

a I V E P H V T A V W G K N V S L K C L I -

33686 →
GAAGTAAATGAAACCATAACACAGATTCTGGGAGAAGATACTGGCAAAAGTTCACAG
 241 -----+-----+-----+-----+-----+-----+-----+-----+ 300
CTTCATTTACTTTGGTATTGTGTCTAAAGTACCCCTTCTATGTACCGTTTCAAGTGTGTC
 a E V N E T I T Q I S W E K I H G K S S Q -

XcmI AloI EarI
 | | |
ACTGTTGCAGTCACCATCCCCAATATGGATTCTGTTCAAGGAGAATATCAGGGAAGA
 301 -----+-----+-----+-----+-----+-----+-----+-----+ 360
TGACAACGTCAAGTGGTAGGGTTACCTAACAGAGACAAGTCCCTTTATAGTCCCTCT
 ← 33685

a T V A V H H P Q Y G F S V Q G E Y Q G R -

DraI
 |
GTCTTGTAAAAAATTACTCACTTAATGATGCAACAATTACTCTGCATAACATAGGATT
 361 -----+-----+-----+-----+-----+-----+-----+-----+ 420
CAGAACAAATTAAATGAGTGAATTACTACGTTGTTATGAGACGTATTGTATCCTAAG
 a V L F K N Y S L N D A T I T L H N I G F -

BmrI
 |
TCTGATTCTGGAAAATACATCTGCAAAGCTGTTACATTCCGCTTGAAATGCCAGTCC
 421 -----+-----+-----+-----+-----+-----+-----+-----+ 480
AGACTAACGCTTTATGTAGACGTTCGACAATGTAAGGGCGAACCTTACGGTCAGG
 ← 33687

a S D S G K Y I C K A V T F P L G N A Q S -

TCTACAACGTAACTGTGTTAGTTGAACCCACTGTGAGCCTGATAAAAGGGCCAGATTCT
 481 -----+-----+-----+-----+-----+-----+-----+-----+ 540
 AGATGTTGACATTGACACAATCAACTGGGTGACACTCGGACTATTTCGGTCTAAGA
 a S T T V T V L V E P T V S L I K G P D S -

AlwNI 32123 →
 |
TTAATTGATGGAGGAAATGAAACAGTAGCAGCCATTGATCGCAGCCACTGGAAAACCC
 541 -----+-----+-----+-----+-----+-----+-----+-----+ 600
AATTAACTACCTCCTTACTTTGTATCGTCGGTAAACGTAGCGTCGGTGACCTTTGGG
 a L I D G G N E T V A A I C I A A T G K P -

BmrI
 32121 → |
GTTGCACATATTGACTGGGAAGGTGATCTGGTGAAATGGAATCCACTACAACCTCTTT
 601 -----+-----+-----+-----+-----+-----+-----+-----+ 660
CAACGTGTATAACTGACCCCTCCACTAGAACCACTTACCTTAGGTGATGTTGAAGAAAA
 ← 33688

a V A H I D W E G D L G E M E S T T T S F -

TatI

|

661 CCAAATGAAACGGCAACGATTATCAGCCAGTACAAGCTATTCCAACCAGATTGCTAGA
-----+-----+-----+-----+-----+-----+-----+-----+
661 GGTACTTTGCCGTTGCTAATAGTCGGTCATGTCGATAAAGGTTGGTCTAAACGATCT
-----+-----+-----+-----+-----+-----+-----+-----+
a P N E T A T I I S Q Y K L F P T R F A R -

MmeI BsbI StyI

| | |

721 GGAAGGCGAATTACTTGTGTTGTAACATCCAGCCTGGAAAAGGACATCCGATACTCT
-----+-----+-----+-----+-----+-----+-----+-----+
721 CCTTCCGCTTAATGAACACAACATTGTAGGTCGGAACCTTTCTGTAGGCTATGAGA
← 32122
a G R R I T C V V K H P A L E K D I R Y S -

Eco57I

|

781 TTCATATTAGACATACAGTATGCTCCTGAAGTTCGGTAAACAGGATATGATGGAAATTGG
-----+-----+-----+-----+-----+-----+-----+-----+
781 AAGTATAATCTGTATGTCATACGAGGACTTCAAAGCCATTGTCCTATACTACCTTTAAC
a F I L D I Q Y A P E V S V T G Y D G N W -

BsaBI MmeI

| |

841 TTTGTAGGAAGAAAAGGTGTTAATCTCAAATGTAATGCTGATGCAAATCCACCACCCCTC
-----+-----+-----+-----+-----+-----+-----+-----+
841 AAACATCCTCTTTCCACAATTAGAGTTACATTACGACTACGTTAGGTGGTGGGAAG
a F V G R K G V N L K C N A D A N P P P F -

Eco57I

BspMI HaeI

| |

901 AAATCTGTGGAGCAGGTTGGATGGACAAATGGCCTGATGGTTATTGGCTTCAGACAAT
-----+-----+-----+-----+-----+-----+-----+-----+
901 TTTAGACACACCTCGTCCACCTACCTGTTACCGGACTACCAAATAACCGAAGTCTGTTA
a K S V W S R L D G Q W P D G L L A S D N -

EarI

|

961 ACTCTTCATTTGTCCATCCATTGACTTTCAATTATTCTGGTGGTATCTGTAAAGTG
-----+-----+-----+-----+-----+-----+-----+-----+
961 TGAGAAAGTAAACAGGTAGGTAACTGAAAGTTAATAAGACCACAAATATAGACATTCAC
a T L H F V H P L T F N Y S G V Y I C K V -

StyI DrdI BstYI Eco57I

| | | |

1021 ACCAATTCCCTGGTCAAAGAAGTGACCAAAAGTCATCTACATTCAGATCCTCCTACT
-----+-----+-----+-----+-----+-----+-----+-----+
1021 TGGTTAAGGGAACCAAGTTCTTCACTGGTTTCAGTAGATGTAAAGTCTAGGAGGATGA
a T N S L G Q R S D Q K V I Y I S D P P T -

BstYI

ACTACCACCCCTCAGCCTACAATTCACTGGCATCCCTCAACTGCTGACATCGAGGATCTA
1081 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 1140
TGATGGTGGGAAGTCGGATGTTAACGTACCGTAGGGAGTTGACGACTGTAGCTCCTAGAT
a T T T L Q P T I Q W H P S T A D I E D L -

HincII

GCAACAGAACCTAAAAATTGCCCTCCCATTGTCAACTTGGCAACAATTAGGATGAC
1141 -----+-----+-----+-----+-----+-----+-----+-----+ 1200
CGTTGTCTGGATTAAACGGGAAGGGTAACAGTTGAAACCGTTGTTAATTCTACTG
a A T E P K K L P F P L S T L A T I K D D -

ScaI

TaqII BanII TatI |
MunI BsrDI (Bgl2) Bsp1286I EarI |||
| | | |
ACAAATTGCCACGATCATTGCTAGTGTAGTGGGTGGGCTCTCTCATAGTACTTGTAAAGT
1201 -----+-----+-----+-----+-----+-----+-----+-----+ 1260
TGTTAACGGTGCTAGTAACGATCACATCACCCACCCGAGAGAAGTATCATGAACATTCA
TGTTAACGGTGC-TCTAGA ← 32124
Start Transmembrane ^ <--34357
a T I A T I I A S V V G G A L F I V L V S -

Bsp24I

SspI SfcI BbsI Bsp24I
| | | |
GTTTTGGCTGGAATATTCTGCTATAGGAGAACGGACGTTCTGGAGACTACTTGCC
1261 -----+-----+-----+-----+-----+-----+-----+ 1320
CAAAACCGACCTTATAAGACGATATCCTCTTGCCTGCAAAGCACCTCTGATGAAACGG
a V L A G I F C Y R R R R T F R G D Y F A -

AAGAACTACATTCCACCATCAGATATGCAAAAAGAACATCACAAATAGATGTTCTCAACAA
1321 -----+-----+-----+-----+-----+-----+-----+ 1380
TTCTTGATGTAAGGTGGTAGTCTATACGTTCTTAGTGTATCTACAGAAAGTTGTT
← 32125 ←
a K N Y I P P S D M Q K E S Q I D V L Q Q -

GATGAGCTTGATTCTTACCCAGACAGTGTAAAAAGAAAACAAAATCCAGTGAACAAT
1381 -----+-----+-----+-----+-----+-----+-----+ 1440
CTACTCGAACTAAGAACATGGGTCTGTCACATTTTTCTTTGTTTAGGTCACTTGTAA
a D E L D S Y P D S V K K E N K N P V N N -

BsaAI EarI
SnaBI SapI

| |
CTAATACGTAAGACTATTTAGAAGAGCCTGAAAAACTCAGTGGAACATGTAGAAAAT
1441 -----+-----+-----+-----+-----+-----+-----+ 1500
GATTATGCATTCTGATAATCTCTCGGACTTTTGAGTCACCTGTACATCTTTA
a L I R K D Y L E E P E K T Q W N N V E N -

BglII
BstYI

|

CTCAATAGGTTGAAAGACCAATGGATTATTATGAAGATCTAAAATGGGAATGAAGTTT

1501 -----+-----+-----+-----+-----+-----+-----+-----+ 1560

GAGTTATCCAAACTTCTGGTTACCTAATAATACCTCTAGATTTTACCCCTACTTCAAA

a L N R F E R P M D Y Y E D L K M G M K F -

MsI
NspI

AfI
BspLU1II DrdII

| | | | | | | |

GTCAGTGATGAAACATTATGATGAAAACGAAGATGACTTAGTTCACATGTAGATGGTTCC

1561 -----+-----+-----+-----+-----+-----+-----+ 1620

CAGTCACTACTGTAATACTACTTTGCTTCACTGAATCAAAGTGTACATCTACCAAGG

a V S D E H Y D E N E D D L V S H V D G S -

BsrGI
TatI

(NotI)

GTAATTCAGGAGGGAGTGGTATGTTAGCAACCACTGAATGTGACTTAACATGTACA

1621 -----+-----+-----+-----+-----+-----+-----+ 1680

CATTAAGGTCCCTCCCTCACCATACAAATCGTTGGTGACTTACACTGAATTGATACTGT

<-34358 -CGCCGGCG

a V I S R R E W Y V * <-36018

SpeI BclI SmlI

| | |

ATGTTCAATTCAACACTAGTTGATCATTTCAGATTGTTCACTTTCTTGAGGAAGAAT

1681 -----+-----+-----+-----+-----+-----+-----+ 1740

TACAAGTAAGTGTGATCAACTAGTAAAGTCTAACAGTATGAAAAAGAACTCCTCTTA

HindIII Bce83I HindIII

| | |

AAGCTTTCAAGTTGATTTCAAGCTTACTTTTATATTCTAATCTGACAAATGAAAAT

1741 -----+-----+-----+-----+-----+-----+-----+ 1800

TTCGAAAAAGTTCAACTAAAGTTGAAATGAAAATATAAGATTAGACTGTTACTTTA

TatI
Bce83I

| |

GTAAAATCTGAGTTCAAGTGTATCTAACAGCTGTTACAATTTTTCAATGCTGTACTAC

1801 -----+-----+-----+-----+-----+-----+-----+ 1860

CATTTAGACTCAAGTCACATAGATCGACGAAATGTTAAAAAAAGTTACGACATGATG

ApoI
DraI ScaI
SmlI SwaI TatI

| | | | | |

TGTCTCAAGATTAAATTAAATGCAGAGTACTTTATTGGTGTGAGGCACACAGGTAAGA

1861 -----+-----+-----+-----+-----+-----+-----+ 1920

ACAGAGTTCTAAATTAAAATTACGTCTCATGAAATAACCACACTCCGTGTGCCATTCT
 HincII | ApoI | DraI |
 AGAAATGTCAACATTAATGTATGACTTACTGGTACAAAAATTAAAAAGGAACT
 1921 -----+-----+-----+-----+-----+-----+ 1980
 TCTTACAGTTGAATTACATACTGAATGAACCAGTTTAAAAATTTCCTTGAA

Tth111II
 Bce83I | SmlI |
 ACCTTGACATTGTATTAAATGTTACCTAAGACTATAATCTCAAGTATGATGTTGTT
 1981 -----+-----+-----+-----+-----+-----+ 2040
 TGGAACGTAAACACATAATTACAAATGGATTCTGATATTAGAGTTCATACTACAAACAA

BtsI
 HaeIV
 ApoI | Hin4I |
 TAACATATACCTCTCAAAATTATCACCACTCAATGACACTGCATCAAAATTGACTATAA
 2041 -----+-----+-----+-----+-----+-----+ 2100
 ATTGTATATGGAGAGTTAAATAGTGGTAGTTGACGTAGTTAACTGATATT

SspI | SspI |
 AACTAATTCAAGAAATATTATATATATTAAATACAAAAATTTAGCCTGATG
 2101 -----+-----+-----+-----+-----+-----+ 2160
 TTGATTAAGTTCTTATAAAATATATAAAATTATGTTTATAATCGGACTAC

Tth111II
 |
 GAATGGCTTCCTTTCAAACATTATTTCTAAGTTCTATACAAATGAAATCTTACCT
 2161 -----+-----+-----+-----+-----+-----+ 2220
 CTTACCGAAAGGAAAGTTGTAATAAAAGATTCAAAGATATGTTACTTTAGAAATGGA

MsI | SfcI |
 VspI |
 CTGCATATTAAATGAGCCTGCCATAATTACTGTAGAGTGGCTTTCAAAGATATTTGTT
 2221 -----+-----+-----+-----+-----+-----+ 2280
 GACGTATAATTACTCGAACGGTATTAATGACATCTCACCGAAAAGTTCTATAAAACAA

EarI
 SapI |
 |
 GCACAAAAACTGTGGTAGTAAACTCAGTGAACATGATGTGGAGAGCATAATTAGCTG
 2281 -----+-----+-----+-----+-----+-----+ 2340
 CGTGATTTGACACCATTTGAGTCACTTGACTACACACACCTTCTGTATTAATCGAC

SspI | BspMI |
 |
 GTCAATATTTGTCCAAAATACCTGCAAGAGTAATAAAACATAACCTTCAAACATGA
 2341 -----+-----+-----+-----+-----+-----+ 2400
 CAGTTATAAAAACAGGTTATGGACGTTCTCATTATTTATGTATGGAAAGTTGTACT

Tth111I
 |
 TAATTATTAGTTTTTTCTGGAACATGGATTTGGTACATTAGCAGTAGCCT
 2401 -----+-----+-----+-----+-----+-----+-----+ 2460
 ATTAATAATCAAAAAAAAAGGAAAGACCTGTACCTAAAACCATGTAATCGTCATCGGA

TATTTAATGCTTATGCTCTAACATACTAATAGAAATGAAAAGACGCAGAGAGAGCAT
 2461 -----+-----+-----+-----+-----+-----+-----+ 2520
 ATAAAATTACGAAATACAGGATTGTATGATTATCTTACTTTCTGCGTCTCTCGTA

SpeI
 ScaI
 TatI ||| Eco57I SfcI ApoI
 | ||| | | | |
 TTGGAATACTGAAGTACTAGTTAGAAATGAGACTTCAGCCAACAATCTATAGAAAG
 2521 -----+-----+-----+-----+-----+-----+-----+ 2580
 AAGCCTTATGACTTCATGATCAAAATCTTACTCTGAAAGTCGGTTAGATATCTTC

BsrGI
 TatI
 |
 AATTTATGGACCATCTGTTTAGTTATTAATGTTGATGTTGTCAAATGGGTAAATG
 2581 -----+-----+-----+-----+-----+-----+-----+ 2640
 TTAAAATACCTGGTAGAACAAAATCAATAAAATTACAACCTACAACAAGTTACCCATTAC

ApoI
 |
 TACAGAAAGAAAATTTAGAGTAACTTGGAACTTGATATAACTAGAAAAACTAGAT
 2641 -----+-----+-----+-----+-----+-----+-----+ 2700
 ATGTCTTCTTTAAAATCTCATTGAAACCTATATTGATCTTTTGATCTA

BsmI
 |
 TATAGAATTAGTCGTAACACTTGCTAATGGACATTGGCATTTCATCTCCTTTTCCTCCT
 2701 -----+-----+-----+-----+-----+-----+-----+ 2760
 ATATCTTAATCAGCCATTGTGAACGATTACCTGTAACCGTAAGTAGAGGAAAAGGAGGA

AAGTGTATGTATGTGTTTAAGATTCTGTTTACGATTAAAACGGAAACATGAGGTT
 2761 -----+-----+-----+-----+-----+-----+-----+ 2820
 TTCACATACATACACAAAATTCTAAAGACAAAAATGCTAATTGACCTTGACTCCAA

TTTGTTTTGTTTTTACATAATTACATATATTCTCTGAATCATTATCTTGAG
 2821 -----+-----+-----+-----+-----+-----+-----+ 2880
 AAAACAAAAACAAAAAATGTATTAATGTATATAAGGAAGACTTAGAAATAGAAAATC

Tth111I SfcI
 | |
 AAAGAAATGTTACCTAAACCTCAAATGTGCTTTGTTGTGAGGTAATTAAATTGCTTC
 2881 -----+-----+-----+-----+-----+-----+-----+ 2940
 TTTCTTACAATGGATTGAAGTTACACGAAAACAAACACTCCATTAATTAAACGAAG

```

TACAGTGGAGGCTTACAAAATTATTGTGACAACATTTGAAGCTGAAAGGGATAGTTTTT
2941 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 3000
ATGTCACCTCCGAATTTAATAAACACTGTTGATAAAACTTCGACTTCCTATCAAAAA

CTATTGCTAAGTCATTTGAAAAAGTGACCATTTGCCAGTGAAATGAAGTGGAAAGTTAGT
3001 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 3060
GATAACGATTCACTAAACTTTCACTGGTAAACGGTCACTTACTTCACCTTCAATCA

AGGAGAATCATAAATTAAATATATTATTTGTTAATAAAAAGGCAAAGTAGTAGGTACTT
3061 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 3120
TCCTCTTAGTATTAATTATATAATAAAACAATTATTTCCGTTCATCATCCATGAA

          ApoI
          EcoRI
          BsiEI |
          EaeI |
          EagI |
          GdII |
          NotI |
DraI           SspI           MspAII |
|               |               |||
TTTAAACCCCTCCCAACCAGCCCTTCTCAATATTCAAACTAAACAGCGGCCGCGA
3121 -----+-----+-----+-----+-----+-----+-----+-----+-----+ 3180
AAATTGGGAGGGTTGGTCGGAAAGAGTTAAAGTAGTTAGATTGTGCCGGCGCT

          ATTCAGC
3181 ----- 3187
          TAAGTCG

```

Enzymes that do cut:

AfI	I	AloI	AlwNI	ApoI	BanI	BanII	BbsI	Bce83I
BclI	I	BglII	BmrI	BplI	BpmI	Bpu10I	BsaAI	BsaBI
BsaHI	I	BsaXI	BsbI	BseRI	BsiEI	BsmI	Bsp24I	Bsp1286I
BspGI	I	BspLU11I	BspMI	BsrDI	BsrGI	BstYI	BtsI	DraI
DrdI	I	DrdII	EaeI	EagI	Eari	Eco57I	EcoRI	GdiII
HaeI	I	HaeIV	Hin4I	HincII	HindIII	MmeI	MslI	MspAII
MunI	I	NotI	NspI	PstI	Sapi	ScaI	SfcI	SmlI
SnaBI	I	SpeI	SspI	StyI	Swai	TaqII	TatI	Tth111II
VspI	I	XcmI						

Enzymes that do not cut:

AarI	AatII	AccI	AceIII	AclI	AflII	AhdI	ApaI
ApalI	AscI	AvaI	AvrII	BaeI	BamHI	BbvCI	BcgI
BcI VI	BglI	BmgI	Bpu1102I	BsaI	BsaWI	BseSI	BsgI
BsiHKAI	BsmBI	BspEI	BsrBI	BsrFI	BssHII	BssSI	BstAPI
BstDSI	BstEII	BstXI	BstZ17I	Bsu36I	ClaI	DraIII	EciI
Eco47III	EcoNI	EcoO109I	EcoRV	FseI	FspI	HaeII	HgiEII
HpaI	KpnI	MluI	MscI	NarI	NcoI	NdeI	NgoAIV
NheI	NruI	NsiI	NspV	PacI	Pfl1108I	PflMI	PinAI
PmeI	PmlI	PpiI	PshAI	Psp5II	PvuI	PvuII	RcaI
RleAI	RsrII	SacI	SacII	SalI	SanDI	SbfI	SexAI
SfiI	SgfI	SgrAI	SmaI	SphI	SrfI	Sse8647I	StuI
SunI	Tth111I	XbaI	XhoI	XmnI			